

We claim:

1. A conductor assembly comprised of an implantable, a first flexible conductor and a first layer of nanomagnetic material disposed around said first flexible conductor, wherein:
 - (a) said first layer of nanomagnetic material has a tensile modulus of elasticity of at least about 15×10^6 pounds per square inch;
 - (b) said nanomagnetic material has an average particle size of less than 100 nanometers; and
 - (c) said first layer of nanomagnetic material has a saturation magnetization of from about 200 to about 26,000 Gauss and a thickness of less than about 2 microns.
2. The conductor assembly as recited in claim 1, wherein said conductor assembly is flexible, having a bend radius of less than 2 centimeters.
3. The conductor assembly as recited in claim 1, wherein said first layer of nanomagnetic material has a saturation magnetization of at least 24,000 Gauss.
4. The conductor assembly as recited in claim 1, wherein said conductor assemblies is comprised of 7 flexible conductors, each of which has a layer of said nanomagnetic material disposed around it.
5. The conductor assembly as recited in claim 1, wherein a biocompatible sheath is disposed around said first flexible conductor and said first layer of nanomagnetic material.
6. The conductor assembly as recited in claim 5, wherein a second layer of nanomagnetic material is disposed around said biocompatible sheath.
7. The conductor assembly as recited in claim 1, wherein said first flexible conductor is a monofilament conductor.

8. The conductor assembly as recited in claim 7, wherein said first flexible conductor is a multifilar conductor.
9. The conductor assembly as recited in claim 8, further comprising a second flexible monofilar conductor.
10. The conductor assembly as recited in claim 1, wherein said first flexible conductor is coated with said first layer of nanomagnetic material.
11. The conductor assembly as recited in claim 10, wherein said coating of said first layer of nanomagnetic material on said first flexible conductor is continuous.
12. The conductor assembly as recited in claim 10, wherein said coating of said first layer of nanomagnetic material on said first flexible conductor is discontinuous.
13. The conductor assembly as recited in claim 12, wherein said coating of said first layer of nanomagnetic material on said first flexible conductor is discontinuous along the axial dimension of said first flexible conductor.
14. The conductor assembly as recited in claim 9 wherein said multifilar conductor is disposed outside of said monofilar conductor.
15. The conductor assembly as recited in claim 10, wherein said multifilar conductor is disposed inside of said monofilar conductor.
16. The conductor assembly as recited in claim 1, wherein said conductor assembly further comprises a centrally disposed pacing lead.
17. The conductor assembly as recited in claim 1, further comprising a catheter connected to said first flexible conductor.
18. The conductor assembly as recited in claim 1, further comprising an electrode connected to said first flexible conductor.

19. The conductor assembly as recited in claim 1, further comprising electric circuitry connected to said first flexible conductor.

20. The conductor assembly as recited in claim 19, further comprising a second layer of nanomagnetic material disposed around said electric circuitry.